

CLAIMS

What is claimed is:

1. A method for conditioning at least one conditionable participant in a fuel cell reaction
5 system comprising:
 applying at least one conditioning frequency to at least one conditionable participant to
 cause at least one of the formation, stimulation and stabilization of at least one conditioned
 participant, whereby said at least one conditioning frequency comprises at least one frequency
10 selected from the group consisting of direct resonance conditioning frequencies, harmonic
 resonance conditioning frequencies and non-harmonic heterodyne conditioning resonance
 frequencies.
2. The method of Claim 1, wherein said conditioned participant resonantly transfers
energy with at least one participant in a fuel cell reaction system to affect at least one reaction
pathway in said fuel cell reaction system.
- 15 3. The method of Claim 2, further comprising applying at least one spectral energy
pattern to said fuel cell reaction system.
4. The method of Claim 3, wherein a rate of at least one reaction in said fuel cell reaction
system is accelerated.
5. A method to affect a fuel cell reaction system with a spectral energy catalyst
20 comprising the steps of:
 targeting at least one participant in said fuel cell reaction system with at least one spectral
energy catalyst to cause at least one of the formation, stimulation and stabilization of at least one
transient or at least one intermediate to result in desired reaction product.
6. A method to affect a particular reaction pathway in a fuel cell reaction system with a
25 spectral catalyst by augmenting a physical catalyst comprising the steps of:
 duplicating at least a portion of a spectral pattern of a physical catalyst with at least one
energy emitter source to form a catalytic spectral pattern; and
 applying to the fuel cell reaction system at least a portion of the catalytic spectral pattern
at a sufficient intensity and for a sufficient duration to catalyze at least one reaction in the fuel
30 cell reaction system.